

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/895435C  
Source: TFWJ6  
Date Processed by STIC: 5/11/15

***ENTERED***



IFW16

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/895,435C

DATE: 05/11/2005  
 TIME: 08:51:04

Input Set : A:\29248-17.txt  
 Output Set: N:\CRF4\05112005\I895435C.raw

3 <110> APPLICANT: STEWART, A. Francis  
 4 ZHANG, Youming  
 5 HALLET, Bernard  
 7 <120> TITLE OF INVENTION: TYROSINE RECOMBINASE FOR GENETIC ENGINEERING  
 9 <130> FILE REFERENCE: 29248/17  
 11 <140> CURRENT APPLICATION NUMBER: US 09/895,435C  
 12 <141> CURRENT FILING DATE: 2001-06-30  
 14 <160> NUMBER OF SEQ ID NOS: 11  
 16 <170> SOFTWARE: PatentIn version 3.3  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 244  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Bacillus thuringiensis  
 23 <400> SEQUENCE: 1  
 24 ggtaccgcca gcatttcgga aaaaaaccac gctaagaaaa tcagagttaa aaaatcgaaa 60  
 26 aatatatacat tattccttga cacatacatg ttctttttt atacaaaaaaa taatacaaca 120  
 28 caatattaat tgtgttgtat taggtgttat aataaatata aatcttagggg tttaacgcaa 180  
 30 cacaatttat cgataaataa atacttttag acgcaacaca atttataagac gcggaggaaa 240  
 32 tcac 244  
 35 <210> SEQ ID NO: 2  
 36 <211> LENGTH: 116  
 37 <212> TYPE: DNA  
 38 <213> ORGANISM: Bacillus thuringiensis  
 40 <400> SEQUENCE: 2  
 41 taataacaaca caatattaat tgtgttgtat taggtgttat aataaatata aatcttagggg 60  
 43 tttaacgcaa cacaatttat cgataaataa atacttttag acgcaacaca atttat 116  
 46 <210> SEQ ID NO: 3  
 47 <211> LENGTH: 32  
 48 <212> TYPE: DNA  
 49 <213> ORGANISM: Bacillus thuringiensis  
 51 <400> SEQUENCE: 3  
 52 taataacaaca caatattaat tgtgttgtat ta 32  
 55 <210> SEQ ID NO: 4  
 56 <211> LENGTH: 249  
 57 <212> TYPE: DNA  
 58 <213> ORGANISM: Bacillus thuringiensis  
 60 <400> SEQUENCE: 4  
 61 ggggtaccgc cagcatttcg gaaaaaaaaacc acgctaagaa aatcagagtt aaaaaatcg 60  
 63 aaaaatatac attattccaa gacacataca gtgtttttt ttataaaaaa aataatacaa 120  
 65 cacaatatta attgtgttgtt attaggttt ataataaata taaatctagg ggtttaacgc 180  
 67 aacacaattt atcgataaat aaatactttt agacgcaaca caatttatag acgcggagga 240  
 69 aatcacatg 249  
 72 <210> SEQ ID NO: 5

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**RAW SEQUENCE LISTING**

DATE: 05/11/2005  
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Input Set : A:\29248-17.txt  
Output Set: N:\CRF4\05112005\I895435C.raw

73 <211> LENGTH: 798  
 74 <212> TYPE: DNA  
 75 <213> ORGANISM: Bacillus thuringiensis  
 77 <400> SEQUENCE: 5

78	atggatgttgc	caaaacagtt	ttcttcttat	cttaaacaag	agaataaaac	cgagaacact	60													
80	gttcaggat	acacatcagg	tattagacag	tacataaaat	gtttgaagg	ttccatatgac	120													
82	agaaaattga	caaaattgt	ccgacaaaaat	atcttagagt	acattagtt	tttaaagaat	180													
84	gtcaaaatgt	tgaacccaa	gtccattaac	cacaagatta	gtagcctgc	taaatttaat	240													
86	gaatttctaa	tacagaaagg	aagtcaacaa	gatcaagtaa	ttttattttaga	tgaaaaaaag	300													
88	tttttacaaa	gtgtgttaga	ggataataac	aaacgttaatt	atgcaattgc	cactctccta	360													
90	gcatatacag	gagtagttagt	ttcagaggca	ttatctatca	aatgaatga	cttcaattta	420													
92	cagactgggg	aatgttattat	tgcgaaatgg	aaaggaggta	aacaacgaaat	tgttattacta	480													
94	aatagtaagg	tacttagtgc	tatcaaagat	tatctcatcg	atcgaaaaac	atacagtaca	540													
96	gcacatgaat	ctccgtatct	ttttatttagt	aaaaagcgg	aaaagctcg	ccgtacggc	600													
98	gtcaatcgta	tctttaatc	atacaggaat	gttattactc	cacaccaatt	acgacacttc	660													
100	ttctgtacga	atgcaattca	aaaaggattt	agcattcatg	aagttgc	aaaatcga	720													
102	caactctaaca	tccatacgc	actactttac	acaaatccaa	accaactgca	gctaaaaaat	780													
104	aaaatggagc	tcttataa					798													
107	<210>	SEQ ID NO:	6																	
108	<211>	LENGTH:	265																	
109	<212>	TYPE:	PRT																	
110	<213>	ORGANISM:	Bacillus thuringiensis																	
112	<400>	SEQUENCE:	6																	
114	Met	Asp	Val	Ala	Lys	Gln	Phe	Ser	Ser	Tyr	Leu	Lys	Gln	Glu	Asn	Lys				
115	1				5					10						15				
118	Thr	Glu	Asn	Thr	Val	Gln	Gly	Tyr	Thr	Ser	Gly	Ile	Arg	Gln	Tyr	Ile				
119					20					25						30				
122	Lys	Trp	Phe	Glu	Gly	Ser	Tyr	Asp	Arg	Lys	Leu	Thr	Lys	Leu	Tyr	Arg				
123					35					40						45				
126	Gln	Asn	Ile	Leu	Glu	Tyr	Ile	Ser	Tyr	Leu	Lys	Asn	Val	Lys	Met	Leu				
127					50					55						60				
130	Asn	Ala	Lys	Ser	Ile	Asn	His	Lys	Ile	Ser	Ser	Leu	Ala	Lys	Phe	Asn				
131	65					70					75						80			
134	Glu	Phe	Leu	Ile	Gln	Lys	Gly	Ser	Gln	Gln	Asp	Gln	Val	Ile	Leu	Leu				
135						85					90						95			
138	Asp	Val	Lys	Lys	Phe	Leu	Gln	Ser	Val	Leu	Glu	Asp	Asn	Asn	Lys	Arg				
139						100					105						110			
142	Asn	Tyr	Ala	Ile	Ala	Thr	Leu	Leu	Ala	Tyr	Thr	Gly	Val	Arg	Ile	Ser				
143						115					120						125			
146	Glu	Ala	Leu	Ser	Ile	Lys	Met	Asn	Asp	Phe	Asn	Leu	Gln	Thr	Gly	Glu				
147						130					135						140			
150	Cys	Ile	Ile	Arg	Ser	Gly	Lys	Gly	Gly	Lys	Gln	Arg	Ile	Val	Leu	Leu				
151	145						150					155						160		
154	Asn	Ser	Lys	Val	Leu	Ser	Ala	Ile	Lys	Asp	Tyr	Leu	Ile	Asp	Arg	Lys				
155							165					170						175		
158	Thr	Tyr	Ser	Thr	Ala	His	Glu	Ser	Pro	Tyr	Leu	Phe	Ile	Ser	Lys	Lys				
159							180					185						190		
162	Arg	Glu	Lys	Leu	Asp	Arg	Thr	Val	Val	Asn	Arg	Ile	Phe	Lys	Ser	Tyr				
163						195					200						205			

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 PATENT APPLICATION: US/09/895,435C TIME: 08:51:04

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166 Arg Asn Val Ile Thr Pro His Gln Leu Arg His Phe Phe Cys Thr Asn
167      210          215          220
170 Ala Ile Gln Lys Gly Phe Ser Ile His Glu Val Ala Asn Gln Ala Gly
171      225          230          235          240
174 His Ser Asn Ile His Thr Thr Leu Leu Tyr Thr Asn Pro Asn Gln Leu
175          245          250          255
178 Gln Leu Lys Asn Lys Met Glu Leu Leu
179          260          265
182 <210> SEQ ID NO: 7
183 <211> LENGTH: 116
184 <212> TYPE: DNA
185 <213> ORGANISM: Bacillus thuringiensis
187 <400> SEQUENCE: 7
188 taataacaaca caatattaat tgtgttgtat taggtgttat aataaatata tatctagggg      60
190 tttaacgcaa cacaatttat cgataaataa atacttttag acgcaacaca atttat      116
193 <210> SEQ ID NO: 8
194 <211> LENGTH: 116
195 <212> TYPE: DNA
196 <213> ORGANISM: Bacillus thuringiensis
198 <400> SEQUENCE: 8
199 taataacaaca caatattaat tgtgttgtat taggtgttat aatatatata aatctagggg      60
201 tttaacgcaa cacaatttat cgataaataa atacttttag acgcaacaca atttat      116
204 <210> SEQ ID NO: 9
205 <211> LENGTH: 116
206 <212> TYPE: DNA
207 <213> ORGANISM: Bacillus thuringiensis
210 <220> FEATURE:
211 <221> NAME/KEY: N_region
212 <222> LOCATION: (33)..(64)
213 <223> OTHER INFORMATION: n = a, t, g, or #
215 <220> FEATURE:
216 <221> NAME/KEY: misc_feature
217 <222> LOCATION: (33)..(64)
218 <223> OTHER INFORMATION: n is a, c, g, or t
220 <220> FEATURE:
221 <221> NAME/KEY: N_region
222 <222> LOCATION: (81)..(100)
223 <223> OTHER INFORMATION: n = a, t, g, or #
225 <220> FEATURE:
226 <221> NAME/KEY: misc_feature
227 <222> LOCATION: (81)..(100)
228 <223> OTHER INFORMATION: n is a, c, g, or t
230 <400> SEQUENCE: 9
W--> 231 taataacaaca caatattaat tgtgttgtat tannnnnnnn nnnnnnnnnn nnnnnnnnnn      60
233 nnnnacgcaa cacaatttat nnnnnnnnnn nnnnnnnnnn acgcaacaca atttat      116
236 <210> SEQ ID NO: 10
237 <211> LENGTH: 124
238 <212> TYPE: DNA
239 <213> ORGANISM: Bacillus thuringiensis

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/895,435C

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Input Set : A:\29248-17.txt  
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242 <220> FEATURE:  
243 <221> NAME/KEY: N\_region  
244 <222> LOCATION: (33)..(74)  
245 <223> OTHER INFORMATION: n = a, t, g, or #c  
247 <220> FEATURE:  
248 <221> NAME/KEY: misc\_feature  
249 <222> LOCATION: (33)..(74)  
250 <223> OTHER INFORMATION: n is a, c, g, or t  
252 <400> SEQUENCE: 10  
**W--> 253 taatacaaca caatattaat tgtgttgtat tannnnnnnnn nnnnnnnnnn nnnnnnnnnnn 60**  
255 nnnnnnnnnn nnnnacgcaa cacaatttac gataaataaa tacttttaga cgcaacacaa 120  
257 ttta 124  
260 <210> SEQ ID NO: 11  
261 <211> LENGTH: 134  
262 <212> TYPE: DNA  
263 <213> ORGANISM: Bacillus thuringiensis  
265 <400> SEQUENCE: 11  
266 taatacaaca caatattaat tgtgttgtat taggtgttat aataaatata aatctagggg 60  
268 tttaacgcaa cacaatttac cgataaataaa atacttttag acgcaacacaa atttataagac 120  
270 gcggaggaaa tcac 134

RAW SEQUENCE LISTING ERROR SUMMARY                    DATE: 05/11/2005  
PATENT APPLICATION: US/09/895,435C                    TIME: 08:51:05

Input Set : A:\29248-17.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52  
Seq#:9; N Pos. 53,54,55,56,57,58,59,60,61,62,63,64,81,82,83,84,85,86,87,88  
Seq#:9; N Pos. 89,90,91,92,93,94,95,96,97,98,99,100  
Seq#:10; N Pos. 33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52  
Seq#:10; N Pos. 53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72  
Seq#:10; N Pos. 73,74

**VERIFICATION SUMMARY**  
PATENT APPLICATION: US/09/895,435C

DATE: 05/11/2005  
TIME: 08:51:05

Input Set : A:\29248-17.txt  
Output Set: N:\CRF4\05112005\I895435C.raw

L:231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
M:341 Repeated in SeqNo=9  
L:253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
M:341 Repeated in SeqNo=10